References:
Calder, W. A. 1973. Micro-habitat selection during nesting of hummingbirds in the Rocky Mountains. *Ecology* 54: 127–134.
Calder, W. A. 1974. The thermal and radiant environment of a winter hummingbird nest. *Condor* 76: 268–273.
Hilty, S. L. & Brown, W. L. 1986. *A Guide to the Birds of Colombia*. Princeton University Press.
Schuchmann, K.-L. 1988. A nest of the Saphire-vented Puffleg *Eriocnemis luciani*. *Bull. Brit. Orn. Cl.* 108: 13–14.
Snow, D. W. 1985. Hummingbird. *In: A Dictionary of Birds* (B. Campbell & E. Lack, eds): 293–296. Poyser.

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Intraspecific variation in the natal pterylosis of the Ochre-bellied Flycatcher *Myionectes oleagneus* (Tyrannidae)

by Charles T. Collins

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The nestlings of the Ochre-bellied Flycatcher *Myionectes (Pipromorpha) oleagneus* have been described as having "sparse but long grey natal downs" (Skutch 1960: 568). This paper provides detailed data on the natal pterylosis of this Neotropical tyrant flycatcher.

A total of 8 specimens from 3 nests was collected c. 5 miles north of the town of Arima in Arima Valley, St George Co., Trinidad. Three young collected from a nest (A) on 20 June 1963 had pin feathers just beginning to erupt through the skin (Stage B—Wetherbee 1957: 356), while 3 nestlings collected from a nest (B) 17–19 June 1963 and 2 from a third nest (C) on 22 July 1964 were all newly hatched (Stage A—Wetherbee 1957). All specimens were examined under a dissecting microscope and the number and distribution of natal downs (neossoptiles) recorded (Table 1). The terminology for neossoptile tracts and regions within tracts follows Wetherbee (1957).

All 8 specimens had neossoptiles present in 6 of the 7 tracts and regions bearing downs (coronal and occipital regions of the capital tract, spinal, scapular and femoral tracts and greater secondary coverts). Only 3 specimens, however, all from nest A, had neossoptiles present in the orbital region of the capital tract (Table 1).

The total number of neossoptiles present in single specimens ranged from 34 to 62. On the other hand, the variation among 6 of the 8 specimens was only 48–57 total neossoptiles. Choosing a single pattern and number of neossoptiles to characterize this species is difficult due to the observed degree of intraspecific variation. One approach is to utilize the average number (rounded to the nearest whole number) of neossoptiles present in

TABLE 1
Distribution of neossoptiles (on left/right sides) in 8 young of the Ochre-bellied Flycatcher *Myionectes oleagneus*

Tract/Region	*Nest A*			*Nest B*			*Nest C*	
Coronal	5/5	5/4	3/4	5/4	1/2	6/6	3/4	4/3
Occipital	3/3	3/3	3/3	3/4	3/3	3/3	3/3	3/3
Orbital	1/3	1/2	2/0	0/0	0/0	0/0	0/0	0/0
Spinal	7/7	6/6	7/6	7/7	4/5	6/9	7/7	9/9
Scapular	7/7	6/6	7/7	6/6	6/6	6/6	7/6	6/6
Femoral	4/4	5/4	4/4	3/4	0/0	2/3	2/2	0/1
Greater Secondary Coverts	3/3	3/3	2/2	4/4	2/2	3/3	2/2	2/2
Total	62	57	54	57	34	56	48	48

each tract or region and to assign it (bilaterally) to that tract/region as done by Collins & Minsky (1983). By this method a total of 54 neossoptiles would seem to characterize this flycatcher. When a larger number of specimens is available, a 'typical' number can be chosen based on the number of neossoptiles most frequently observed in each tract or region (Collins 1973). By this method, a typical total of 54 neossoptiles per individual is again indicated. This figure is consistent with the median total number of neossoptiles per individual (54–56) but slightly higher than the average of 52 neossoptiles per individual for the 8 specimens examined here (Table 1). The intraspecific and inter-nest differences reported here do not seem to have been effected by any ontogenetic influences. The highest numbers of neossoptiles were from the slightly older nestlings in nest A which could have been expected to be subjected to some loss through abrasion; the lowest number of neossoptiles were from the newly hatched young in nests B and C (Table 1). As also noted by Clark (1967), the presence of neossoptiles in additional tracts, such as the orbital region of the capital tract in the nestlings from nest A, seems most likely to occur in those individuals with the greatest total number of neossoptiles. The total number of neossoptiles present in the Ochre-bellied Flycatcher is very low when compared to the numbers recorded for open cup nesting species, some of which have in excess of 600 neossoptiles (Collins, unpubl.). Such a low number is however typical of a number of other closed-nest building species particularly among the Tyrannidae (Collins & McDaniel 1989). This correlation should be examined further in other passerine families for possible taxononic as well as ecological implications.

In previous studies of passerine natal pterylosis most attention has been given to interspecific differences (Collins 1963, Collins & Kemp 1976, Collins & Minsky 1982, 1983, Collins & McDaniel 1989, Ingels 1979, Markus 1970, Wetherbee 1957). The topic of intraspecific variation has not been given similar attention. This is mostly due to the very small number of individuals per species examined in these studies; only 4% of the species considered in these 8 studies were represented by more than

10 individuals, while 75% were represented by only 3 or fewer specimens. The near anecdotal approach in these studies is related to the scarcity of appropriate specimens in most museum collections and the difficulty of obtaining large numbers of individuals for natal pterylosis studies for all but some colonially nesting species (Clark 1967). Even so, the matter of intraspecific variation must receive more attention than it has to date before detailed interspecific comparisons can be made and their taxonomic implications evaluated.

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References:

Clark, G. A. Jr. 1967. Individual variation in natal pterylosis of Red-winged Blackbirds. *Condor* 69: 423–424.

Collins, C. T. 1963. The natal pterylosis of tanagers. *Bird-Banding* 34: 36–38.

—— 1973. The natal pterylosis of the Swallow-tanager. *Bull. Brit. Orn. Cl.* 93: 155–157.

—— & Kemp, M. H. 1976. Natal pterylosis of *Sporophila* finches. *Wilson Bull.* 88: 154–157.

—— & Minsky, D. 1982. Natal pterylosis of three Neotropical blackbirds (Icteridae). *Bull. Brit. Orn. Cl.* 102: 129–131.

—— & —— 1983. The natal pterylosis of *Amphispiza* sparrows. *Condor* 85: 375–376.

—— & McDaniel, K. M. 1989. The natal pterylosis of closed-nest building tyrant fly-catchers (Aves: Tyrannidae). *Bull. So. Calif. Acad. Sci.* 88: 127–130.

Ingels, J. 1979. The natal pterylosis of three *Thraupis* tanagers. *Bull. Brit. Orn. Cl.* 99: 12–15.

Markus, M. B. 1970. A preliminary survey of the occurrence of neossoptiles in South African passeriform birds with special reference to natal pteryloses. Unpubl. MSc thesis, Univ. Pretoria (Univ. Microfilms M-2297).

Skutch, A. 1960. Life histories of Central American birds. *Pac. Coast Avif.* 34: 1–593.

Wetherbee, D. K. 1957. Natal plumages and downy pteryloses of passerine birds of North America. *Bull. Am. Mus. Nat. Hist.* 113: 339–346.

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Behaviour and vocalizations of an undescribed Canastero *Asthenes* sp. from Brazil

by Mark Pearman

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The genus *Asthenes*, comprising some 21 species are largely terrestrially adapted members of the *Furnariidae*. They are found in a wide range of open and semi-open habitats from Andean and Patagonian steppe to marsh, chaco and pampa.